

Applicant: Hee-Boong Park
Application No.: 10/540,819

REMARKS/ARGUMENTS

Claims 1 - 16 are currently pending in this application. New claim 16 has been added.

Claim Rejections - 35 USC §102(e)

Claims 1 - 15 have been rejected under 35 USC §102(e) as being anticipated by Anderson et al. (U.S. Patent Publication No. 2006/0241423, hereinafter "Anderson").

With respect to claim 1, the apparatus includes a movable means having a flat surface and at least one ultrasonic probe fixed to the movable means, wherein an object to be scanned is placed on the flat surface, and an ultrasonic wave transmission/reception surface of the ultrasonic probe is substantially flush with an upper surface of the movable means. Scanning is performed by moving the movable means to which the ultrasonic probe is fixed while the object to be scanned is placed on top of the flat surface. Claim 16 similarly defines a movable support surface which fully supports an object to be scanned throughout the scanning operation.

Anderson fails to disclose the movable means having a flat surface on which the object is placed and an ultrasonic probe fixed to the movable means such that

Applicant: Hee-Boong Park
Application No.: 10/540,819

the ultrasonic wave transmission/reception surface of the ultrasonic probe is substantially flush with an upper surface of the movable means.

The Examiner does not specifically indicate which element in Anderson corresponds to the movable means, but it is assumed that the Examiner equates Anderson's probe 218 with the claimed moveable means. In Anderson, the ultrasonic probe is not attached to a flat surface which fully supports the object to be scanned such that the ultrasonic wave transmission/reception surface of the ultrasonic probe is substantially flush with an upper surface of the movable means. Anderson discloses as follows:

[0040] Scanning assembly 114 comprises a frame 214 having a taut film sheet 216 extending thereover, the frame 214 and film sheet 216 together forming a closed chamber that houses a probe assembly 218.

... The film sheet 216 is attached to the frame 214 in a substantially airtight manner so as to form a closed environment, thereby inhibiting evaporation of the coupling agent or other forms of coupling agent loss.
... (Emphasis added)

[0041] Probe assembly 218 is mechanically coupled to the frame such that it can sweep laterally across the breast (i.e., in the +x/-x direction in FIG. 2) under motor control while its transducer surface is in contact with the film sheet 216. Preferably, the transducer of the probe assembly 218 is a linear array transducer that is sufficiently long, e.g., 15 cm, to obtain a volumetric B-mode scan of the breast in a single sweep. (Emphasis added)

In Anderson, as shown in Figures 2 and 3, a taut film sheet 216 and a frame 214 form a chamber and a probe assembly is installed in the chamber. The object

Applicant: Hee-Boong Park
Application No.: 10/540,819

302 to be scanned is placed on top of the film sheet 216. However, the film sheet 216 is fixed to the frame 214, and the probe assembly is fixed to the frame 214, not to the film sheet 216. The film sheet 216 is not part of the movable means to move the probe assembly. The probe assembly sweeps the object placed on the upper surface of the film sheet 216 while in contact with the lower surface of the film sheet 216.

In accordance with claim 1, the transmission/reception surface of the ultrasonic probe and the upper surface of the movable means define the same surface, and the transmission/reception surface of the ultrasonic probe is moving along with a flat surface of the movable means to sweep the object located on the top surface of the movable means. Claim 16 defines this as a movable support surface which fully supports the scanning surface, on which the deformable object is to be disposed for scanning, at all times.

In contrast, in Anderson, the transducer surface is merely in contact with the lower surface of the film sheet 216, and the transducer surface and the upper surface of the film sheet 216 do not define the same surface. The film sheet 216 is fixed to the frame 214 and the film sheet 216 does not move along with the transducer surface.

Anderson fails to disclose the movable means having a flat surface on which the object is placed and an ultrasonic probe fixed to the movable means such that

Applicant: Hee-Boong Park
Application No.: 10/540,819

the ultrasonic wave transmission/reception surface of the ultrasonic probe is substantially flush with an upper surface of the movable means. The Anderson device does not provide full support for the scanned object by the moving components during the scanning operation as defined by claims 1-16.

Based on the arguments presented above, withdrawal of the 35 USC §102(e) rejection of claims and allowance of claims 1 - 16 are respectfully requested.

Respectfully submitted,

Hee-Boong Park

By /Yong Beom Hwang/
Yong Beom Hwang
Registration No. 61,373

Volpe and Koenig, P.C.
United Plaza, Suite 1600
30 South 17th Street
Philadelphia, PA 19103
Telephone: (215) 568-6400
Facsimile: (215) 568-6499
YBH/CFK/srs